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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,601	08/11/2003	Ravin Balakrishnan	1252.1023C	3398

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EXAMINER

CUNNINGHAM, GREGORY F

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/637,601	Applicant(s) BALAKRISHNAN ET AL.	
	Examiner Gregory F. Cunningham	Art Unit 2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.  
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-6 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is responsive to decision of petition to withdrawal issuance of patent dated 7/28/2005.

2. Prosecution on the merits of this application is reopened on at least claim 1 considered unpatentable for the reasons indicated below:

Claim 1 recites a drawing system, comprising, inter alia, a first and second input devices held by corresponding hands of a user. Kurtenbach also teaches a first and second input device (see fig. 3). Claim 1 also recites drawing a polyline between corresponding positions on a display with the first input device designating a potential curve and the second device moving along the potential curve and converting a portion of the potential curve into the polyline. Kurtenbach teaches using a curve guide (fig. 6) with a non-dominant hand and drawing a curve with a dominant hand (page 5, col. Curve Guides).

3. The disposition of the claims is as follows: claims 1 - 6 are pending in the application. Claims 1-6 are independent claims. Claims 1-6 were previously allowed.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being disclosed by Kurtenback et al., “The Design of a GUI Paradigm based on Tablets, Two-hands, and Transparency”, hereinafter Kurtenback.

A. Claim 1, “A drawing system, comprising:

a display [see Figs. 2 and 3];

first and second input devices held by corresponding hands of a user [col. 3 at ‘The Application’ – col. 4, Fig. 3, wherein screen corresponds to “a display”, ‘two customized Wacom puck devices (one per hand) for our input devices’ corresponds to “first and second input devices held by corresponding hands of a user”]; and

a computer determining corresponding positions of said input devices on said display [col. 5 at ‘Fundamental Input Device Mappings’ and col. 6 at ‘Creating and Editing Objects’, wherein the ‘D’ and ‘ND’ hand/puck are used to translate, rotate and scale objects], and

drawing a polyline between the corresponding positions on said display with the first input device designating a potential curve and the second device moving along the potential curve and converting a portion of the potential curve into the polyline [col. 3 at ‘The Application: ‘T3 allows simple 2D graphics to be created and edited such as circles, rectangles, triangles and polylines. Figure 2 shows the screen of T3 and some simple graphics.’; and col. 9 at ‘Curve Guides’ and fig. 6 ‘That is, the curve guide is a “controlling element” or “dynamic constraint” that is mostly managed by the ND device and is used in conjunction with ink generation tools being controlled by the D hand. This two-handed interaction technique facilitates the production of curves.’]” is disclosed supra [as detailed].

B. Claim 2, “A drawing system, comprising:

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a display [see Figs. 2 and 3];

first and second input devices held by corresponding hands of a user [col. 3 at 'The Application' – col. 4, Fig. 3, wherein screen corresponds to "a display", 'two customized Wacom puck devices (one per hand) for our input devices' corresponds to "first and second input devices held by corresponding hands of a user"]; and

a computer determining corresponding positions of said input devices on said display [col. 5 at 'Fundamental Input Device Mappings' and col. 6 at 'Creating and Editing Objects', wherein the 'D' and 'ND' hand/puck are used to translate, rotate and scale objects], and

drawing a polyline between the corresponding positions on said display with the first input device specifying a curve influence direction [col. 9 at 'Each curve resides on a toolglass sheet (see Figure 6) which can be positioned and rotated with the ND device. A scale widget on the toolglass sheet allows the entire sheet (i.e., curve) to be scaled. Note that all three affine transformations (position, rotation and scale) can be performed at the same time.'] and the second input device converting the curve influence direction into the polyline [col. 9 at 'After the toolglass sheet has been positioned, the D device is used to lay down ink by running the ink cursor along the contour of the curve. The inking cursor is automatically snapped to the contour of the curve.']] is disclosed supra [as detailed].

C. Claim 3, "A drawing system, comprising:

a display [see Figs. 2 and 3];

first and second input devices held by corresponding hands of a user [col. 3 at 'The Application' – col. 4, Fig. 3, wherein screen corresponds to "a display", 'two customized Wacom

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puck devices (one per hand) for our input devices” corresponds to “first and second input devices held by corresponding hands of a user”]; and

a computer determining corresponding positions of said input devices on said display [col. 5 at ‘Fundamental Input Device Mappings’ and col. 6 at ‘Creating and Editing Objects’, wherein the ‘D’ and ‘ND’ hand/puck are used to translate, rotate and scale objects], and

drawing a polyline between the corresponding positions on said display with the first input and second input devices creating the polyline by tracing a curve using both input devices [

col. 12 at ‘*Snapping Sweeps*. Like in T3 sweeps can be used to control precisely the path of the ink while brushing freely along a curve. When used with varying thickness or opacity brushes, this allows the artist to give a more lively character to their drawing, while “snapping” to very precise outlines (see Figure 9). Figure 9: Brushing along a curve guide. The spline above the car was placed along the upper edge of the car and used to **trace along the guide**, with repeated, varying width brush strokes.’]” is disclosed supra [as detailed].

D. Claim 4, “A drawing system, comprising:

a display [see Figs. 2 and 3];

first and second input devices held by corresponding hands of a user [col. 3 at ‘The Application’ – col. 4, Fig. 3, wherein screen corresponds to “a display”, ‘two customized Wacom puck devices (one per hand) for our input devices” corresponds to “first and second input devices held by corresponding hands of a user”]; and

a computer determining corresponding positions of said input devices on said display [col. 5 at ‘Fundamental Input Device Mappings’ and col. 6 at ‘Creating and Editing Objects’, wherein the ‘D’ and ‘ND’ hand/puck are used to translate, rotate and scale objects], and

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drawing a polyline between the corresponding positions on said display, where the corresponding positions of said input devices and at least one additional previous position contribute to a shape of the polyline [col. 12 at

‘However, it cannot be rotated. To compensate for this sweeps have manipulation handles (see figure 8). When the D hand grabs a handle of a “sweep”, two opposite corners of the bounding box for the sweep become attached to either hand, and the user can move, scale and rotate these shapes with a “two-handed stretchies” style of interaction. *Snapping Sweeps*. Like in T3, sweeps can be used to control precisely the path of the ink while brushing freely along a curve.’, wherein two opposite corners of bounding box correspond to “positions of said input devices” and the curve/polyline itself corresponds to “at least one additional previous position” or where previous portions/positions of the generated curve/polyline correspond to “at least one additional previous position” constitute the shape of the polyline]” is disclosed supra [as detailed].

E. Per independent claim 5, this is directed to a system for the system of independent claim 4, and therefore is rejected to independent claim 4, wherein Kurtenback discloses for both polyline and curve – see col. 3 at ‘The Application’ at ‘T3 allows simple 2D graphics to be created and edited such as circles, rectangles, triangles and polylines.’ and throughout Kurtenback application is for lines and curves for example col. 8, at ‘We have observed artists rotating the artwork so lines or curves can be drawn with a movement that is easier to perform with the arm.’

F. Per independent claim 6, this is directed to a drawing method for the drawing system of independent claim 4, and therefore is rejected to independent claim 4.

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*Responses*

6. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

*Inquiries*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The Central FAX Number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gregory F. Cunningham  
Examiner  
Art Unit 2676

gfc

9/21/2005



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